

**IN THE CLAIMS**

Please amend claim 29 as follows:

29. A kit for treating a vascular proliferative disease in a patient comprising a catheter and a gene encoding a single cyclin-dependent kinase inhibitor, wherein the cyclin-dependent kinase inhibitor is p27.

**REMARKS**

Claims 29 - 34 and 36 - 42 are pending.

**Claim Amendments**

Applicants have amended claim 29. No new matter has been introduced into this application by reason of this amendment. The amendment is supported by the specification, page 5, lines 15 to 20. Here, the inventors teach that p27 expression and overexpression is sufficient to produce inhibition of vascular smooth muscle cell growth *in vivo* and that the p27 gene can be used as an anti-proliferative gene to treat vascular proliferative diseases, including coronary restenosis.

**Claim Rejection Under 35 U.S.C. §102**

Claims 29, and 32-34 are rejected under 35 U.S.C. §102(e) as being anticipated by Gyuris, U.S. Patent Number 5,672,508 (the '508 patent). The Examiner alleges that the '508 patent teaches a composition comprising a nucleic acid encoding p27 gene and a catheter.

**The '508 Patent Does Not Teach Every Element of Claim 29.**

The Applicants respectfully submit that '508 patent does not teach the complete subject matter of Claim 29. The '508 patent describes chimeric proteins containing cyclin-dependent kinase-binding motifs from two or more different proteins as well as nucleic acids encoding these chimera. (column 5, lines 18-20; column 5, lines 2-4). As amended, claim 29 recites a kit for treating a vascular proliferative disease in a patient comprising a catheter and a gene encoding a single cyclin-dependent kinase inhibitor (CKI), wherein the CKI is p27.

The '508 patent demonstrates that the chimeric proteins have activities greater than the individual polypeptides that make up the chimeric proteins (column 4, lines 36-47). Because of this increased activity, the '508 patent teaches that the chimeric proteins may be useful in treating smooth muscle cell proliferation (column 14, line 41). Hence, the '508 patent teaches away from the use of a single CKI.

Moreover, nowhere does the '508 patent teach or suggest a kit comprising a catheter and a single CKI, or a nucleic acid encoding such a CKI. All disclosures referred to by the Examiner relate to catheter delivery of genes encoding the chimeric proteins. Thus, the '508 patent does not teach every element of Applicants' claim 29.

**The '508 Patent Teaches Away From The Combination of a Gene Encoding  
a Single CKI and a Catheter.**

Applicants submit that the '508 patent teaches away from the combination of claim 29 by teaching the use of chimeric proteins having cyclin-dependent kinase-binding motifs from two or more different CKIs. Upon reading the '508 patent, one skilled in the art would be encouraged to prepare chimeric proteins, having activities greater than the individual polypeptides that make up these proteins, for use in treating smooth muscle cell proliferation. Hence, the '508 patent fails to provide any motivation to make the presently claimed subject matter, namely a kit including a catheter and a gene encoding a single CKI.

Neither does the '508 patent suggest that such a combination would be effective for the treatment of a vascular proliferative disease.

**Dependent Claims**

Because dependent claims 32 - 34 contain the limitations of claim 29, the above arguments also apply to these claims.

Withdrawal of the §102(e) rejection of claims 29 and 32 - 34 is requested for the reasons stated above.

**Rejections under 35 U.S.C. §103(a)**

Claims 29-34, are rejected under 35 U.S.C. §103(a) as being unpatentable over the '508 patent in view of U.S. Patent Number 5,328,470 (the '470 patent). Allegedly, the '470 patent teaches a single and a double balloon catheter for the direct delivery of recombinant nucleic acids encoding genes to the walls of blood vessels.

The Applicants have addressed the '508 patent above. The '470 patent does not make up for the shortcomings of the '508 patent. In particular, the '470 patent does not teach or suggest a kit comprising a catheter and a gene encoding a single cyclin-dependent kinase inhibitor, wherein the cyclin-dependent kinase inhibitor is p27. Withdrawal of the §103 rejection is requested for the reasons stated above.

Claims 29-34 and 36-42 are rejected under 35 U.S.C. §103(a) as being unpatentable over the '508 patent and the '470 patent as applied to claims 29-34 above, and further in view of US 5,962,424 (the '424 patent).

Applicants have addressed the '508 and '470 patents above. Applicants have carefully reviewed the '424 patent, which relates to compositions and methods of using selectins. Applicants cannot locate any disclosure relating to a nucleic acid encoding a p21 gene and a balloon catheter as suggested by the Examiner. Neither have the Applicants found any teaching of a p21 gene operatively linked to a cytotoxic thymidine kinase gene or cytosine deaminase.

gene. Accordingly, withdrawal of the §103 rejection of claims 29-34 and 36-42 is requested for the reasons stated above.

### Conclusions

Applicants have overcome each of the Examiner's rejections. The application is therefore in condition for allowance and early notice to this effect is earnestly solicited. If, for any reason, the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorney at (312) 321-4229.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**

**IN THE CLAIMS.**

29. A kit for treating a vascular proliferative disease in a patient comprising a catheter and a gene encoding [p27] a single cyclin-dependent kinase inhibitor, wherein the cyclin-dependent kinase inhibitor is p27.